



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,979	07/10/2000	Donald U. Gubser	N.C.82,502	9433

7590

10/04/2002

Ralph T Webb  
Naval Research Laboratory  
Associate Counsel (Patents) Code 3008.2  
Washington, DC 20375-5000

EXAMINER

NORRIS, JEREMY C

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/612,979

Applicant(s)

GUBSER ET AL

Examiner

Jeremy C. Norris

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-29 is/are pending in the application.
- 4a) Of the above claim(s) 25-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of claims 18-24 in Paper No. 5 is acknowledged. The traversal is on the ground(s) that "the subject matter of all the claims is sufficiently related to allow them to be searched together without an undue burden on the Examiner." This is not found persuasive because the Examiner has shown burden in the previous Office Action by stating the different classifications of the two groups. Applicants have not addressed or rebutted this showing by the Examiner. Therefore the traversal on this ground is deemed unsuccessful.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,455,225, granted to Duperray et al. (hereafter Duperray).

Duperray discloses, a high temperature superconducting composite made by a process comprising the steps of providing a reticulated foam structure (4, figure 2; see col. 2, lines 15-25) comprising a metal selected from the group consisting of silver, silver alloy, gold and gold alloy (see col. 3, lines 15-20), the reticulated foam structure having continuous ligaments defining a plurality of continuous open cells, filling the continuous

Art Unit: 2827

open cells of the reticulated foam structure with a high temperature superconducting ceramic oxide or precursor (see col. 3, lines 5-35), compacting the filled structure (see col. 3, lines 30-35), and heating the compacted structure to melt and/or texture the high temperature superconducting ceramic oxide or precursor to form a continuous region of high temperature superconducting ceramic oxide throughout the compacted structure (see col. 3, lines 30-40), wherein the metal is selected to have a higher melting temperature than the melt/texture temperature of the superconducting ceramic oxide or precursor [claim 18].

Duperray additionally discloses, a high temperature superconducting composite conductor made by a process comprising the steps of providing a reticulated foam structure (4, figure 2, see col. 2, lines 15-25) made of a metal selected from the group consisting of silver, silver alloy, gold and gold alloy (see col. 3, lines 15-20), the reticulated foam structure having continuous ligaments defining a plurality of continuous open cells (see figure 2), enclosing the reticulated foam structure in a sheath (1, figure 1), filling the continuous open cells of the enclosed reticulated foam structure with a superconducting ceramic oxide or precursor, compacting the sheath, thereby compacting the enclosed filled reticulated foam structure, and heating the compacted sheath to melt and/or texture the compacted superconducting ceramic oxide or precursor to form a composite superconducting conductor having a continuous region of superconducting ceramic oxide throughout the enclosed, compressed reticulated foam structure (see col. 3, lines 5-45) wherein the metal is selected to have a higher melting

Art Unit: 2827

temperature than the melt/texture temperature of the superconducting ceramic oxide or precursor [claim 19].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duperray in view of US 6,360,425, granted to Shiga et al. (hereafter Shiga).

Regarding claim 20, Duperray discloses, a high temperature superconducting composite made by a process comprising the steps of providing a reticulated foam structure (4, figure 2), the reticulated foam structure having continuous ligaments defining a plurality of continuous open cells, filling the continuous open cells of the reticulated foam structure with a high temperature superconducting ceramic oxide or

precursor, compacting the filled structure, and heating the compacted structure to melt and/or texture the high temperature superconducting ceramic oxide or precursor to form a continuous region of high temperature superconducting ceramic oxide throughout the compacted structure, wherein the compacted structure is heated to a temperature that is less than the melting temperature of the foam (see col. 3, lines 5-50). Duperray does not specifically state that the foam is a silver alloy [claim 20]. However, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to use a silver alloy in lieu of the silver foam in the invention of Duperray as silver alloys are known substitutes for silver in superconductive applications as evidenced by Shiga (see col. 4, lines 40-55). Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 21 and 22, Duperray discloses a composite superconducting conductor made by a process comprising the steps of providing a reticulated foam structure (4, figure 2, see col. 2, lines 15-25), the reticulated foam structure having continuous ligaments defining a plurality of continuous open cells, enclosing the reticulated foam structure in a sheath (1, figure 1), filling the continuous open cells of the enclosed reticulated foam structure with a superconducting ceramic oxide or precursor, compacting the sheath, thereby compacting the enclosed filled reticulated foam structure, and heating the compacted sheath to melt and/or texture the compacted superconducting ceramic oxide or precursor, wherein the compacted structure is heated to a temperature that is less than the melting temperature of the silver alloy, to form a

Art Unit: 2827

composite superconducting conductor having a continuous region of superconducting ceramic oxide throughout the enclosed, compacted reticulated foam structure (see col. 3, lines 5-50). Duperray does not specifically state that the foam is a silver alloy [claim 21]. However, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to use a silver palladium alloy in lieu of the silver foam in the invention of Duperray as silver palladium alloys are known substitutes for silver in superconductive applications as evidenced by Shiga (see col. 4, lines 40-55).

Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 23 and 24, the modified invention of Duperray does not specifically state the weight percentage of silver in the silver palladium alloy. Thus, the disclosure encompasses all weight percentages of silver possible. Furthermore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to select the weight percentage of silver to be greater than 90% as the greater the percentage of silver is, the less costly the device will be since silver is much less expensive than palladium. Moreover, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

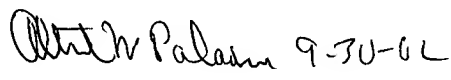
US 6,316,391	Doi et al.,
US 6,344,430	Duperray et al.,
US 6,360,425	Christopherson et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 703-306-5737. The examiner can normally be reached on Mon.-Th., 9AM - 6:30 PM and alt. Fri. 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN  
September 30, 2002

  
**ALBERT W. PALADINI**  
**PRIMARY EXAMINER**